

DEPARTMENT OF THE ARMY
US ARMY MEDICAL DEPARTMENT ACTIVITY
Fort Huachuca, Arizona 85613-7079

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Logistics

MEDICAL BULK REFRIGERATOR AUTOMATED ALARM SYSTEM

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1. HISTORY. This is a revision of an existing publication.

2. PURPOSE:

2.1 To provide guidance for the use and maintenance of the automated alarm system. This system is used to monitor refrigeration and freezer temperature.

2.2 This plan provides procedures for the safe operation, maintenance and actions necessary to respond to unscheduled problems which may occur within the system and implements an alarm management plan with a full degree of automation that meets or exceeds regulatory requirements. The plan ensures compliance with Army Regulations (AR), Association of American Blood Banks (AABB), National Fire Protection Agency (NFPA) Code 99 and Joint Commission on Accreditation of Healthcare Organizations (JCAHO) standards.

3. SCOPE. This Pamphlet is applicable to all personnel assigned or attached to the USA MEDDAC, and VETCOM, Fort Huachuca, Arizona.

4. REFERENCES:

4.1 Accreditation Manual for Hospitals, Joint Commission accreditation of Healthcare Organizations, Current Editions.

*This publication supersedes MEDDAC PAM 750-5, dated 6 Feb 2001

4.2 Army Regulation 40-61, Medical Logistics Policies, paragraphs 2-3c, and 8-1a (1).

4.3 Army Regulation 40-657, Veterinary/Medical Food Safety , Quality Assurance and Laboratory Service.

4.4 Supply Bulletin 8-75-11, Army Medical Department Supply Information.

4.5 American Association of Blood Banks (AABB).

4.6 National Institute of Standards Bureau (NISB).

4.7 CFR 41 (Code of Federal Regulations).

4.8 National Fire Protection Agency (NFPA) code 99.

4.9 USP Temperature Standards (United States Pharmacopeia)

5. EXPLANATION OF SYSTEM: Medical Bulk Storage Refrigerators are currently monitored by a temperature and call box monitoring system. The call box is programmed with an alarm notification alert message. This system detects set temperature fluctuations and automatically calls programmed contact numbers if the settings rise above or drop below the set temperature range.

6. AUTOMATED ALARM SYSTEM OVERVIEW.

6.1 Equipment monitored by this system is located within several clinics belonging to the MEDDAC and VETCOM.

6.2 The system has expansion capabilities for adding additional alarms.

6.3 The system incorporates telephone modem capabilities in order to reduce the use of hardwired runs in ceilings.

7 RESPONSIBILITIES:

7.1 Chief, Logistics Division shall: Establish and provide oversight to the Automated Refrigerator Alarm Notification System for Raymond W. Bliss Army Health Center.

7.2 Chief, Information Management Division shall: Issue a monitoring device (cell phone) to designated personnel in order to monitor bulk storage medical refrigeration.

7.3 Security Officer and First Sergeant shall:

7.3.1 Ensure the AOD and AAOD are aware of the Refrigerator Alarm Notification System and instructed on proper use of their assigned cordless phone (how and when to check for messages if they are away from or unable to answer the phone in a timely manner).

7.3.2 Maintain a copy of this Pamphlet with Appendix A and B in the AOD instruction book.

7.4 Department NCOIC(s) shall:

7.4.1 Hand Receipt a monitoring device (cell phone) from IMD that will receive alarm notifications from the assigned refrigeration unit's monitoring device.

7.4.2 Develop a Department level SOP for this program, and ensure temperature logs are used to monitor and record temperatures at least two times per shift. Temperature logs are to be kept on file for inspection purposes.

7.4.3 Develop a Departmental Duty Roster to ensure the cell phone is monitored on a continuous basis (24/7) while managing "leave" and "TDY" accordingly.

7.4.4 Ensure Department personnel are properly trained on how to respond to the alert notification. SEE Appendix B.

7.5 The AOD/AAOD shall:

7.5.1 Check refrigerator temperatures at least two times per shift, and record temperatures in the Duty Log (DA form 1594).

7.5.2 Monitor the AOD cordless phone using normal monitoring procedures and respond to alarm notifications as directed in Appendix B.

7.6 The Logistics Division Medical Materiel Branch NCOIC shall:

7.6.1 Ensure cold storage space for medical materiel (that must be relocated) is provided.

7.7 The Facility Management Branch shall: Respond to alert notifications as appropriate (See Appendix B for procedures) and provide technical expertise (when required) to fix any malfunctioning refrigerator unit.

7.8 The Clinical Engineering Branch shall:

7.8.1 Serve as the Primary Administrator for the system and provide training as needed.

7.8.2 Respond to alert notifications as appropriate (See Appendix B for procedures).

7.8.3 Coordinate the repair of Refrigeration Systems with the Facilities Management Branch as necessary.

7.8.4 Ensure that a Clinical Engineer Technician is available on-call after duty hours to respond to failures of the related alarms.

7.8.5 Schedule and conduct Monthly Quality Control Maintenance checks to ensure the Alarm System and the notification process is functioning properly; this information will be documented and filed in Clinical Engineering office.

The proponent of this publication is the Chief Logistics Division. Users are invited to send comments and suggested improvements on DA Form 2028 directly to Logistics Division, ATTN: MCXJ-LO, Fort Huachuca, Arizona 85613-7079.

FOR THE COMMANDER:

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APPENDIX A
BULK STORAGE AREAS MONITORED

1. The following Departments have Medical Refrigerators with functioning Alarm Notification Systems:

- a. Allergy/Immunizations
- b. Logistics Warehouse

Medical Refrigerator Alarm Notification Standard Operating
Procedure

The following Departments have Medical Refrigerators with functioning Alarm Notification Systems:
CALLS AOD (520)533-2963.

DEPARTMENT

Allergy/Immunizations

*Lab

*Logistics Warehouse

OR/Anesthesia

Pharmacy

Ray Clinic

Department of Military Medicine

Vet Clinic

MI Student Clinic

* Note: Logistics Warehouse and Allergy/Immunization Clinic are the only areas identified as bulk storage locations. All other locations only store a daily supply of immunizations. Logistics Warehouse and Lab are the only areas identified as Optional Backups for Freezers.

APPENDIX B
EXPLANATION OF ALARM RESPONSE

1. The AOD/AAOD will receive an alarm notification when the following occurs:

a. If the refrigerator thermometer detects a temperature drop **below 36°F (2°C) or above 46°F (8°C).**

b. When power to the unit is interrupted or lost, this signals the auto dialer to activate.

2. Alarm Notification Procedures for non-duty hours:

a. STEP 1: When the unit "alarms", it is programmed to call the AOD/AAOD. Once the phone is answered, the following message will be announced: "The refrigerator in (specified area) has a problem. Contact the on-call person for the clinic. Meet the on-call person at the clinic to verify if the refrigerator or freezer is too hot or too cold. Use the inside thermometer to make this determination. If the refrigerator or freezer has a problem, contact Facility personnel during duty hours at 533-2000. After duty hours call 533-2623. If the refrigerator or freezer is functioning properly and the temperature monitor is malfunctioning, contact the Clinical Engineering Branch during duty hours at 533-3712. After duty hours call the On-Call Technician." One minute later, the alarm system will call the AOD/AAOD again with the exact same message.

b. STEP 2: Upon notification the AOD/AAOD will call the affected Department NCOIC to inform them of the alarm notification (see Alert Roster in AOD Office). Once the AOD/AAOD ensures the Department has been notified both parties will proceed to the area of concern. **The AOD must ensure they log ALL actions concerning the incident in the Duty Log (DA1594).**

c. STEP 3: Upon arrival to the area of concern, the individual notified from the department will open the refrigerator and check the thermometer inside of the unit. Verify the internal thermometer with the one on the exterior of the unit.

d. STEP 4: If the thermometers indicate a temperature range **below 35°F (2°C), or above 46°F (8°C)** the AOD/AAOD will call the Facilities Management section at 533-5554/2000 during duty hours and pager # 417-6461 during non-duty hours **(if no response, contact After Hour Work Order Desk at 533-2623).** **If Facilities Management determines that the Refrigerator Unit is non functional:**

(1) The AOD will contact the on call Logistics Warehouse personnel at 234-8525 and the Logistics Division Chief (see Alert Roster).

(2) Remove the contents of the Refrigerator Unit and relocate contents to the backup Cold Storage area in the Medical Materiel Warehouse.

(3) If the internal thermometer is within normal range of 35°F (2°C) to 46°F (8°C), then the AOD/AAOD will call the Clinical Engineering department during duty hours at 533-2836/3712. During non-duty hours, notify the on call Biomedical Technician. (See Clinical Engineering on call roster posted in AOD Office.